

APPLICATION TO JOIN THE WORLD  
HEALTH ORGANIZATION'S "SAFE  
COMMUNITY NETWORK"

The city of Trondheim hereby applies to be accepted as a Safe Community in the World Health Organization's Safe Communities Network.



## Table of contents

Background .....	3
Description of the city of Trondheim.....	6
Indicators for international Safe Communities .....	8
Trondheim's efforts on the basis of the indicators .....	8
1. An infrastructure based on participation and collaboration, led by a intersectoral group responsible for promoting safety in the community .....	9
2. Long-term programmes for both genders and all ages, environments and situations.....	12
3. Programmes aimed at high-risk groups and environments and programmes promoting safety for vulnerable groups .....	23
4. Programmes for documenting the frequency and causes of injuries.....	30
5. Evaluation of programme processes and the impact of changes.....	34
6. Ongoing participation in national and international Safe Community Networks.....	35
References .....	36

## Background

Injury-preventing activities have been given high priority over the last 20 years, both on the central and local government levels. During the world congress in Sweden in 1989 a manifesto was drawn up to launch the concept of Safe Communities. Later WHO formulated a new concept which today comprises six criteria that local authorities or local communities must satisfy to be recognized as Safe Communities. A number of safe communities have been recognized internationally (*Safe Communities* <http://www.phs.ki.se/csp/>). For many years the city of Harstad was the only community recognized as a Safe Community in Norway, but today 13 Norwegian municipalities have gained this recognition, and in 2005 another three are in the process of being recognized as safe communities, one of these being Trondheim.

Accidents are one of the greatest health problems in Norway and the rest of the world. In 2002 accidents caused around 3% of all deaths in Norway, thus being the fifth or fourth largest cause of death. In 2003 around 18 000 persons in Trondheim came to the emergency medical service or were hospitalized because of an accident or poisoning. In recent years Trondheim has seen an increase in moderate and serious injuries due to accidents, and to counter this, a number of measures focusing on young children and the elderly have been initiated by the local authorities.

In White Paper no. 16 on public health (*Resept for et sunnere Norge* – Prescription for a healthier Norway) (1) the Government states that it will review and revise an overarching action plan for health and the environment, and develop new strategies in special areas such as prevention of accidents and injuries and prevention of asthma and allergy problems.

The long-term aim of the Trondheim local authority's strategy plan (2) is that by 2010 Trondheim shall be a safe city with respect to life and health, the early-development environment, health care and care for the elderly, crime, public transport and the opportunity to have employment and housing in a city where the inhabitants feel they have a high quality of life. Based on the municipal plan and the report on public health, a report on *Folkehelsearbeidet i Trondheim - veien mot en sunnere og tryggere by* [Public health activities in Trondheim – towards a healthier and safer city] was discussed by the city council in August 2004 and the following decisions were made:

- The city council supports efforts to improve public health, particularly for children and young persons.
- The city council supports joining networks such as Safe Community and Healthy City.
- The city council believes that pupils should have obligatory physical activities each day in school.
- The city council considers physical activity, well-being, a good environment and cultural activities as vital preventive health measures. Access to green areas, being out in nature and investing in outdoor facilities and sports arenas are important measures for a healthier city.
- The city council requests that the Trondheim local authority should draw more and more on these ideas for further development of a healthy and safe city. The city council deems that interdisciplinary and interagency cooperation is necessary to achieve this.
- The city council requests that the status for the prioritized areas be submitted to the City Council for discussion in the autumn of 2005.

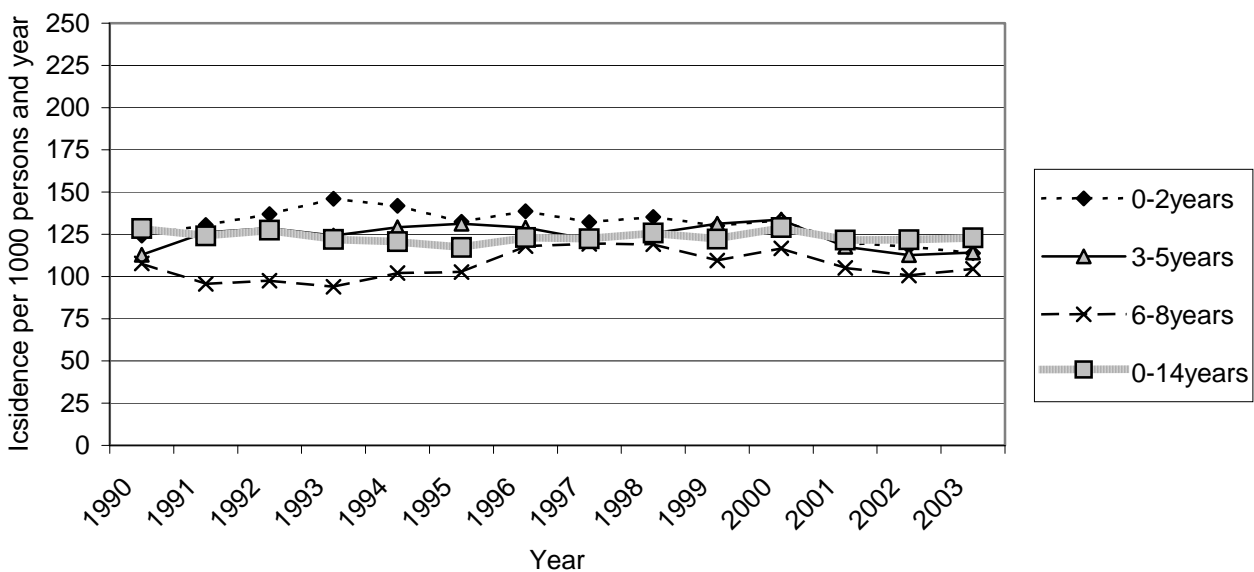
1.

Trondheim is participating in two state projects through the County Governor's office, *Fysisk Aktivitet* (Physical Activity – Norwegian abbreviation FYSAK) and *Partnerskap* (Partnership). These development projects aim to build a strong administrative and political base, increase the interdisciplinary focus, and include quality assurance of the health perspective in prevention activities so that measures will be long-term and durable and not dependent on projects.

By establishing a network group on accident prevention and by participating in the state projects, zTrondheim may become a prime mover in the central regions of Norway for the municipal health services, prevention activities and cooperation across sectors and administrative levels.

In Trondheim we already introduced the registration of accidents in 1971. We established an injury register in 1985 at the hospital which was operated by the public health authorities from 1990 through 2002. In 2003 and 2004 this register was operated by St. Olavs University Hospital in cooperation with the Trondheim local authority and with some funding from the Directorate of Health and Social Affairs. The number of patients at the emergency ward at St. Olavs University Hospital and hospitalizations at the hospital due to accidents remained at approximately 125 per 1000 persons annually on average for the 0 to 14 age group from 1990 to 2003 (Figure 1). A new national injury register is being planned and will use a common minimum data set from all the national health facilities. The Trondheim local

**Figure 1.** Insidens per 1000 personer og år for besøk på skadeakuttavdeling for 3 års aldersgrupper og gjennomsnitt for 0 til 14 år for kontaktårsaken ulykker



authority is cooperating with the Directorate of Health and Social Affairs on establishing a new injury register based on the same data set and is aiming for a 2005 start-up. The injury register is important so we can focus our prevention activities, and so professionals can carry out in-depth studies that might benefit the population of Trondheim and the rest of the country.

Risk and vulnerability analyses for the two Trøndelag counties have identified organized crime tied to the import and sales of narcotics as a critical area. We must increase intersectoral efforts on prevention measures in schools and youth environments to reduce drug abuse. Trondheim is collaborating with others to prevent narcotics and substance-abuse crimes and to prevent violence and crime.

Trondheim is facing a number of important challenges when it comes to the prevention of accidents, violence and crime, including:

- establishing an intersectoral group tasked with promoting activities for a safer city
- leading all transport of toxic goods and heavy transports around the city core
- establishing a new system for registration of accidents that includes geographical location
- exploiting knowledge about accidents more systematically in the prevention activities, for example in the planning activities undertaken by the local authorities
- producing information material for the general public on accident prevention, such as fact sheets and references to the Internet
- reducing the number of accidents caused by violence and crime
- thinking "safe city" for the entire population, and particularly for vulnerable groups during all planning activities

Work will also be initiated to deal with these and new challenges in our efforts to make Trondheim a safer city.

The preference is that the local authorities base their accident-prevention activities on national and international networks by applying for recognition as a member of the Safe Communities Network. *This requires that the local authority must participate in meeting arenas to initiate and follow up interaction with various professional communities, business and industry and NGOs, and also not least to ensure the initiation and follow-up of processes. Through its membership the local authority will be obliged to strengthen interaction locally and regionally.*

## Description of the city of Trondheim

Trondheim is the third largest city in Norway, the administrative centre in Sør-Trøndelag county and the bishopric of Nidaros diocese. It is situated where the Nidelven river flows into the Trondheim fjord.



Trondheim was merged with the four adjacent rural municipalities of Strinda, Byneset, Tiller and Leinstrand on 1 January 1964. This amalgamation increased the city's size from 41 km<sup>2</sup> to 342 km<sup>2</sup>, and large agricultural areas came within the city's borders. The city's historical and modern centre lies by the mouth of the Nid river.

**Table 1** The population in Trondheim as of 1 January 2003 distributed by age (Statistics Norway, *the Statistics bank*)

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90 +	Sum
Sum	20 064	18 672	22 767	25 223	21 353	19 440	11 613	9226	5249	744	154 351

In 2004 there were 154 351 inhabitants and around 69 000 households in Trondheim. In addition to the permanent population, more than 13 000 students live in Trondheim, even though their formal residence address is elsewhere. The actual number must be adjusted by deducting around 2000

students who are registered as living in Trondheim, but who are studying somewhere else. Thus the actual number of residents may be estimated at almost 165 000.

**Table 2.** Some figures taken from *Trondheim in Brief (The city of Trondheim, Zoning and Building Permits Office)*

	Figures as of	Trondheim	Norway
Area km <sup>2</sup>	2000	342	323 758
Densely populated area km <sup>2</sup>	2002	60	2194
Population	2003	152 699	4 552 252
Population per km <sup>2</sup>	2003	446.6	14.1
Densely populated area per person in densely populated areas	2002	413.4	631.3
Proportion of children and young persons 0-17 years (%)	2003	23	23.6
Proportion employable age 18-66 years (%)	2003	65.1	63.1
Proportion 67 years and older (%)	2003	11.9	13.3
Proportion persons with non-Western immigrant backgrounds (%)	2002	4.3	4.7
Proportion persons with Western immigrant backgrounds (%)	2002	1.7	2.1
Proportion unemployed 16-24 years (December)	2001	5.1	3.8
Proportion unemployed 25-66 years (December)	2001	3.2	2.6
Gross income per inhabitant 17 years+	2001	245 300	243 900
Men	2001	299 700	304 400
Women	2001	193 800	185 600

Trondheim has a university and research community that is a major resource for many types of businesses and industries. NTNU (The Norwegian University of Science and Technology) and SINTEF-gruppen (the Foundation for Scientific and Industrial Research at the Norwegian University of Science and Technology) – Scandinavia's largest independent research group – make Trondheim the technological capital of Norway.

**Table 3.** Some figures taken from *Trondheim in Brief (The city of Trondheim, Zoning and Building Permits Office)*

	Figures as of	Trondheim
Number of employees	2002	9500
Number of pupils in primary school	2002	19 950
Number of children in after-school programmes	2002	5400
Number of children in day-care centres	2002	7900
Number of consultations at health clinics	2002	30 000
Number of consultations with GPs	2002	250 000
Number of places for persons needing 24-hour care	2002	1400
Number of persons receiving home help	2002	4600
Number of persons receiving meals on wheels	2002	1300
Number of persons living in their home with an aid-call alarm	2002	2400
Number of inquiries to the child welfare authority	2002	720
Tonnes sand/gravel spread on icy roads in winter	2002	14 400
Number of swimming-pool visitors	2002	307 000

**Table 4.** Reported crimes (to the police)

Crimes reported to the police	Figures as of	Trondheim
Number of crimes by persons under 18 years of age reported	2003	475
Violence	2003	871
Vice	2003	114
Drugs	2003	1265
White-collar, crime of gain, hooliganism and other	2003	9918
Sum number of crimes reported	2003	12 168

## **Indicators for international Safe Communities**

A Safe Community should have:

1. An infrastructure based on participation and collaboration, led by an intersectoral group responsible for promoting safety in the community.
2. Long-term programmes for both genders, and all ages, environments and situations.
3. Programmes aimed at high-risk groups and environments, and safety-promoting programmes for vulnerable groups.
4. Programmes for documenting the frequency and causes of injuries.
5. Evaluation of programme processes and the impact of changes.
6. Ongoing participation in national and international Safe Community Networks.

### **Trondheim's efforts on the basis of the indicators**

Prevention of accidents has been on Trondheim's agenda for many years. Several years ago Saupstad district initiated the work to draw up an application for membership in Safe Communities based on its proactive efforts to prevent accidents. However, due to restructuring of the city districts in 1998 no application for membership was sent by Saupstad to Safe Communities.

In the 1990s the Forum for Safety and the Environment was established with the participation of the Trondheim local authority, NTNU, SINTEF, the Norwegian Public Roads Administration and Sør-Trøndelag county authority. The aim of the forum was to help reduce the risk of danger to life, health, the environment and material property, as well as enable the best possible coordination and synergy of accident-prevention measures through the mutual exchange of information and rationalisation of the interdisciplinary cooperation. At this time the Trondheim local authority also participated in the Forum for health-promoting and preventive activities among the population of Trondheim. The aim of this forum was to help initiate and evaluate the impact of health-promoting and preventive activities focusing on children and young persons in Trondheim. Both these forums were active through 2000.

A number of projects have been carried out in Trondheim to study the causes of accidents based on data from the injury register and from accidents registered by the police. These projects have most often been collaborative efforts involving SINTEF, St. Olavs University Hospital and the Trondheim local authority, but they have previously most often been based on and operated by professional communities outside Trondheim. Many of the findings and results from these projects have been applied in the activities to prevent traffic accidents, domestic accidents, and accidents in day-care centres and schools in Trondheim.

The central authorities, represented by the Ministry of Justice, the police in Trondheim and the Trondheim local authority are collaborating on preventing accidents, violence and crime.

## **1. An infrastructure based on participation and collaboration, led by a intersectoral group responsible for promoting safety in the community**

Based on Trondheim's municipal plan (2) and the national report on public health (1), a programme was drawn up that has been described in "Public health activities in Trondheim – toward a healthier and safer city" (*Folkehelsearbeidet i Trondheim - Veien mot en sunnere og tryggere by*) (3). This programme describes how the Trondheim local authority is to structure activities to improve public health to meet the goal in the municipal plan that by 2010 Trondheim shall be a safe city when it comes to life and health, the early-development environment, health care and care for the elderly, crime, public transport and the opportunity to have employment and housing in a city where the inhabitants feel they have a high quality of life. Trondheim will organize prevention activities as suggested in Figure 2.

The *City Council* has the overriding responsibility in the city of Trondheim. This council consists of 85 elected representatives who meet once a month.

*The City Executive Board* consists of 11 politicians from the city council employed in full-time positions, in addition to the mayor, deputy mayor and city directors in Trondheim. The City Executive Board meets once a week to prepare cases for the City Council and the City Council Committees, in addition to deciding cases when the authority to do so has been delegated to it by the City Council.

### ***The Board of Chief Executive Officers***

In 1998-99 the structure of the city administration was modified to give it two decision-making levels. The first level is the Chief City Executive; the second is the various city services. The Chief City Executive exercises his or her power through the Board of Chief Executive Officers, a staff of six city directors.

### ***City Services***

As all other local authorities, Trondheim has statutory tasks and duties relating to the prevention of accidents, violence and crime against the population and vulnerable groups. In addition to the statutory tasks, the activities to prevent accidents, violence and crime decided by the intersectoral group will also be incorporated as part of the duties of the managers of the city services.

### **Organization of prevention in keeping with the guidelines for Safe Communities**

The local authority has established an group coordinating public health activities. The group is managed by a public health coordinator and the group is responsible for promoting the work to create a safer city and all other public health issues. The group and the Board of Chief Executive Officers are *intersectoral groups*.

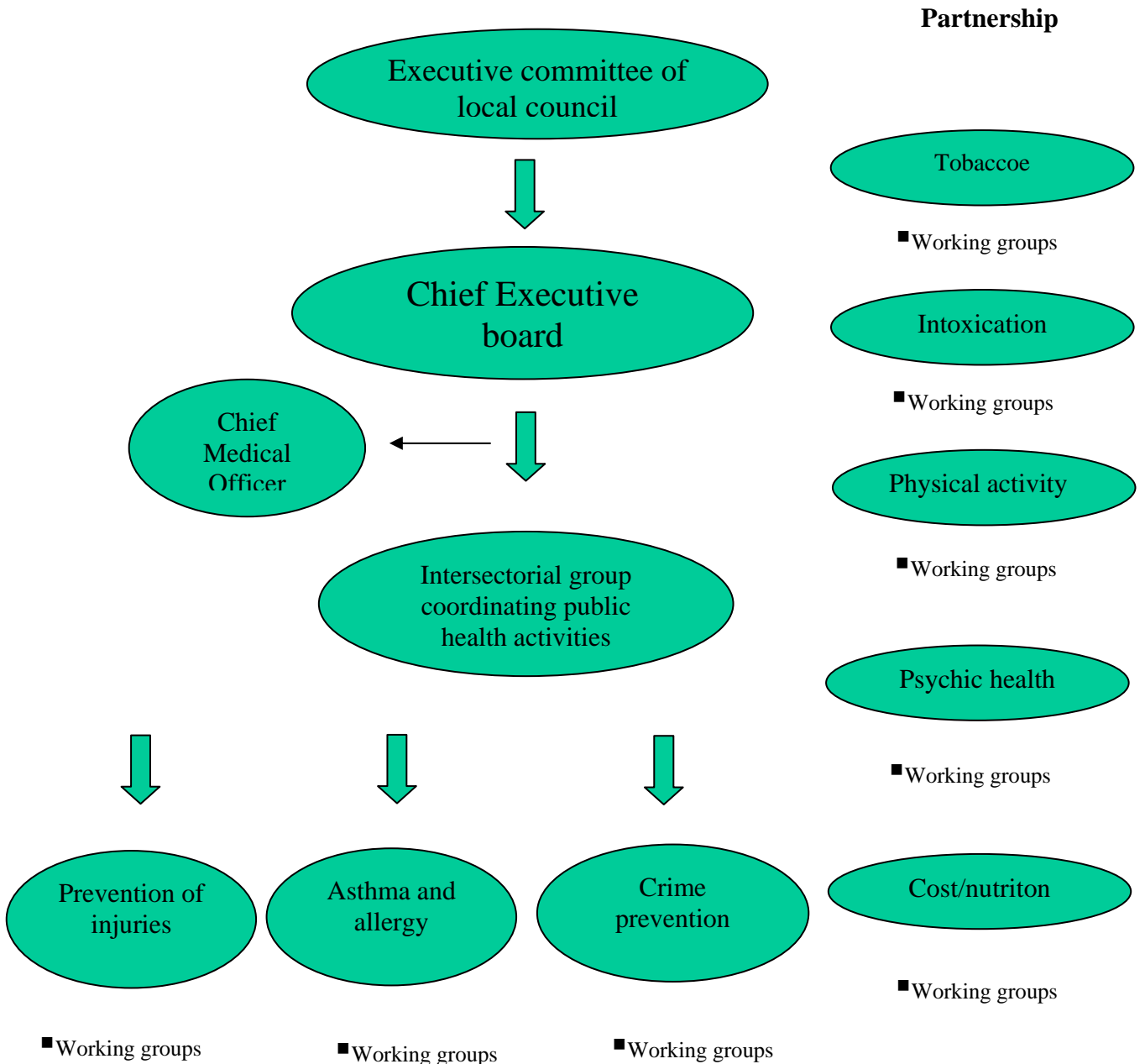
The *Board of Chief Executive Officers* draws on relevant professionals when needed to provide the widest possible intersectoral cooperation in the area. The Chief of Police, the Director of St. Olavs University Hospital, the deans of the Medical Faculty, NTNU, the College of Sør-Trøndelag (HiST), representatives of NGOs in Trondheim and others may be called upon.

The group consists of advisers of each of the Chief Executive Officers of the Board of Chief Executive Officers, and the group's mandate is to plan injury prevention activities, other public health activities and measures in the municipality.

The members of the committee are:

Mette H. Berntsen, Public health coordinator; Guttorm Eilertsen – medical advisor/doctor; Bjørg Jacobsen – advisor schoolchildren and education, schools; Bodil Øwre-Johnsen – advisor pre-schoolchildren, kindergarten and the after-school programme; Andreas Glimstad - advisor culture and environment; Eyvind Senneset – medical advisor/doctor; Jon Jenssen - advisor public health work.

**Figure 2.** Intersectoral organization of prevention of injuries, violence and crime in Trondheim



**Network groups**

The Trondheim local authority has decided to organize collaborative efforts with other sectors, professional communities and NGOs into network groups. The purpose of the network groups is to achieve better intersectoral cooperation between the local authority and non-municipal agencies, or

cooperation between the local authority and NGOs on working for a safer city. The local authority expects the interaction to improve due to this use of a common focus and because this will centre the input factors on this focus. **Working groups** will develop the specific measures that we have decided to concentrate on. These groups will be established and convened as necessary and will be composed of the participants in the respective network groups.

Today we have the following network groups:

***Network group for Crime prevention - coordination of local crime-prevention measures (SLT).***

The target group is children and young persons between 12 and 18 years of age. The group's mandate is to develop joint strategies to reduce any negative development and to analyze trends in the young people's environment. The group consists of Sør-Trøndelag county police district and the Trondheim local authorities.

The Trondheim local authority employs an SLT coordinator.

***Network group for injury prevention***

The group's mandate is to discuss and propose priority injury-prevention areas.

In addition to the Trondheim local authorities, the following have been invited to participate: the Office of the County Governor, Sør-Trøndelag county, Sør-Trøndelag Police Department, the Department of Health and Social Care at the University College of Sør-Trøndelag, the Department of Community Medicine and General Practice at NTNU, Building and Environmental Engineering at SINTEF, the Red Cross, Save the Children, Gjensidige Nor Insurance Company, the Norwegian Public Roads Administration, St. Olavs University Hospital represented by the Interaction Unit, the Student Welfare Association in Trondheim, the Norwegian Council for Road Safety, the Norwegian Women's Association for Health and Social Care.

The following represent the Trondheim local authority: the Chief Medical Officer, consultants from the Chief City Executive staff, the Head of the Home Help Services, the Fire Protection Coordinator, Trondheim Public Works, Environment Office, day-care centres, the Public Health Nursing Service, the manager of the Physiotherapy Services, the Zoning and Building Permits Office, the Office for Medical Services and Prevention of Infectious Diseases.

Participants in the network group have described their roles in the accident-prevention efforts and proposed special areas on which to concentrate future activities. The intention is to arrange network meetings once or twice a year.

Efforts are now focused on the prevention of domestic accidents involving young children and the elderly. Work has been initiated to systematize prevention of accidents in day-care centres based on supervision of playground equipment, and in 2005 work will be launched on the prevention of accidents in schools.

***The network group for prevention of asthma and allergy*** is working accident prevention in their fields, but their mandate and composition is not described in this application.

*Other network groups - partnership*

The city of Trondheim and the county council district are co-operating about other network groups in a partnership. The network groups Physical activity, Tobacco, Intoxication, Cost/nutrition and Psychic health are working accident prevention in their fields, but their mandates and composition are not described in this application

Using this approach, the Trondheim local authority shall work in accordance with the visions in the municipal plan and the public health report to establish positive and proactive cooperation between the Trondheim authorities, the city services and the city's population to make it a safer city for everyone.

## **2. Long-term programmes for both genders and all ages, environments and situations**

In the municipal plan Trondheim has outlined a clear goal of working with a long-term perspective to become a safer city. To satisfy this aim, in 2005 the city authorities shall continue to focus on:

- Preventing accidents
- Preventing violence
- Increasing personal physical activity
- Preventing abuse of alcohol and drugs (substance abuse)
- Other activities that contribute to a safer city

Most of the preventive measures in Trondheim are part of the day-to-day activities undertaken by the city departments and services and results are ensured by embedding the aims in manager contracts that are revised annually and signed by the Chief City Executive and the manager of each department and division.

Today Trondheim cooperates with other sectors, including the Directorate of Health and Social Affairs, the local police and road administration authorities and a number of professional and academic communities.

It is our ambition to improve prevention by establishing close cooperation with the central authorities and by improving cooperation between the city's departments and between the city authorities and local professional/academic communities and NGOs.

*The Contingency Plan* deals with accidents or other difficult situations that are more than what is considered normal risks and burdens, and which demand immediate action. The contingency plan is a tool for all directors and managers, and the Chief City Executive in Trondheim, so they are better equipped to reacting rationally and efficiently to dangerous and/or critical situations.

*Internal control.* All activities undertaken by the local authority (day-care centres, schools, institutions etc.) that are subjected to the Working Environment Act and health and social care legislation must introduce internal control. Internal control is the fundamental principle for systematic health, safety and environment activities at the workplace to protect employees and service users. Managers are obliged to undertake systematic follow-up of the requirements stipulated by the provisions relating to health, safety and the environment that apply to their operations. This must be undertaken in cooperation with employees and their representatives. The purpose of this system is to ensure that problems are discovered and dealt with before injuries or accidents occur. To this end a deviation-handling system has been developed where accidents and injuries are continuously reported electronically (such as accidents involving falls in nursing homes), and where

the department or division manager must propose initiatives to preclude further unfortunate events. The Chief Medical Officer uses weekly overviews to monitor development trends, and to check whether there is a preponderance of accidents or situations in some locations.

*The Environment and Agriculture Office* in Trondheim has been carrying out the following over the last five to ten years:

- Approval of day-care centres and schools in accordance with healthcare regulations focusing on the working environment in day-care centres and schools. Safety, first-aid and health contingency planning are especially considered here.
- Risk-based inspection plans for activities in Trondheim pursuant to the Regulations relating to healthcare focusing on the working environment. Safety is assessed in relation to the necessary frequency of inspection.
- Inspection of other operations and properties based on reports from the general public about a disproportionately large risk of accidents. Advice and guidance on measures will be given in such cases, or public orders/ordinances may also be issued.
- Provision of input on the risk of accidents occurring in all relevant cases related to planning and zoning.

Plans and programmes for prevention of accidents in Trondheim are described for each area we are concentrating on, comprising all ages and both genders, and all environments and situations, for example traffic.

*One address for emergencies.* The emergency medical service in Trondheim is organized by the local authorities. The emergency medical service operates a 24-hour service at St. Olavs University Hospital and also a house-call service. The house-call service sends a doctor and a specially equipped vehicle with a driver trained in emergency medical services to homes.

All cooperation forums involving St. Olavs University Hospital and the Trondheim local authority have emphasized the need for "*ONE ADDRESS FOR EMERGENCIES*". Both parties are pleased with and wish to continue this line of cooperation. The plan is that in the new hospital now under construction there will be a 24/7 emergency centre and primary healthcare service, where all the medical services on the second-line level will be collected in one area with support functions that are always open.

Co-locating the emergency service and St Olavs University Hospital's emergency functions primarily means that patients are offered one address where help is available for acute and sub-acute health problems, primarily outside regular doctor's office opening hours, but also during regular opening hours all days of the week. Patients therefore do not need to know where to go with their health problems. The streaming of patients to the emergency service or the orthopaedic-injury outpatient clinic is an invisible process for the patients. Localizing the emergency service at St. Olavs University Hospital offers 24/7 availability of laboratory services, such as x-rays, blood tests etc. Patients may be transported on trolleys indoors if necessary.

The intention is to also establish a reception of surgery patients and internal medicine patients adjacent to the medical emergency service and the orthopaedic-injury outpatient clinic, and this is part of the planning for the new hospital. This allows inspection by the surgery or medical departments at the emergency service. Unnecessary hospitalization may thus be avoided, and this also offers helpful assistance for the doctors at the hospital and the emergency service.

### **Prevention of accidents in the city of Trondheim**

Below we describe prevention of traffic accidents, prevention of accidents in homes, day-care centres and schools, as well as other accident-prevention efforts in Trondheim.

#### **Prevention of traffic accidents in Trondheim**

*The Traffic Safety Plan for Trondheim 2002-2005* (4). The City Executive Board functions as the traffic safety committee, and the vision for traffic safety activities in Trondheim is that *road and traffic systems shall be designed to prevent death or life-long injury due to trivial individual errors committed by people driving or walking in traffic (the zero vision). Through instruction and information inhabitants shall acquire the necessary skills to use the road and traffic system.*

The main aims for traffic-safety activities in Trondheim for the five years from 2001 to 2005 are:

- *To reduce the average number of injuries/fatalities by 15%, i.e. 90 injuries/fatalities.*
- *To reduce the average number of serious injuries/fatalities by 30 %, i.e. six serious injuries/fatalities.*

This selection of goals is based on an analysis that includes a review of accidents from 1994 to 1999, registration of problems for school children on their way to school and registration of traffic instruction given in primary school (Norsk Gallup). The following areas have been given priority:

*Measures to reduce speed.* Activities to adapt the speed limit in line with the zero vision shall have high priority (30 or 40 km/h where there are conflicts between pedestrians, bicyclists and motor vehicles, 50 km/h where there is a danger of side-impact collisions (intersections) and 70 km/H when there is a danger of head-on collisions).

*Operation and maintenance.* Operation and maintenance of facilities for pedestrians and bicyclists shall be given high priority. A comprehensive network of bicycle paths has been constructed.

*Accident points and distances.* The number of accident points in Trondheim shall be reduced during the planning period in relation to the number of registered accident points in 1994 to 1997.

*Traffic safety in physical planning.* Traffic safety considerations must be emphasized in all local planning and cases related to building permits.

*The safety of children and young persons.* During this period (within 2005) all school children in the municipality (with the exception of children who are entitled to bussing because of distance considerations) shall have a road to school that satisfies safety requirements. Traffic instruction shall be given priority in school by embedding traffic safety instruction in the annual plans for all classes. All headmasters/principals shall ensure that traffic safety activities are given priority in school as a whole and in the year plan for each class.

*"Aktiv skoleveg"* (Active road to school). The Trondheim local authority, the Norwegian Council for Road Safety and the County Governor are cooperating on "Aktiv skoleveg" to prevent accidents. A campaign is being planned in February 2005.

*Traffic facility for instructing children in traffic safety.* In the autumn of 2000 a traffic-model facility was built at Eberg school. This miniature traffic system is used to instruct Trondheim's primary school children in traffic safety. The Norwegian Public Roads Administration in Sør-Trøndelag county and the Trondheim local authority have been responsible for building this traffic-safety model. The traffic model is also used for general instruction in traffic behaviour for children in day-

care centres and primary school, and is also used for instruction in traffic behaviour for bicyclists (5; 6).

*The Norwegian Public Roads Administration* has comprehensive traffic-safety activities in Trondheim in conjunction with the local authorities. The normal division of responsibilities is that the local authority implements measures for city roads, while the Norwegian Public Roads Administration is responsible for measures on national and county roads. The on-going pilot project has nevertheless given the city a larger responsibility on county and national roads.

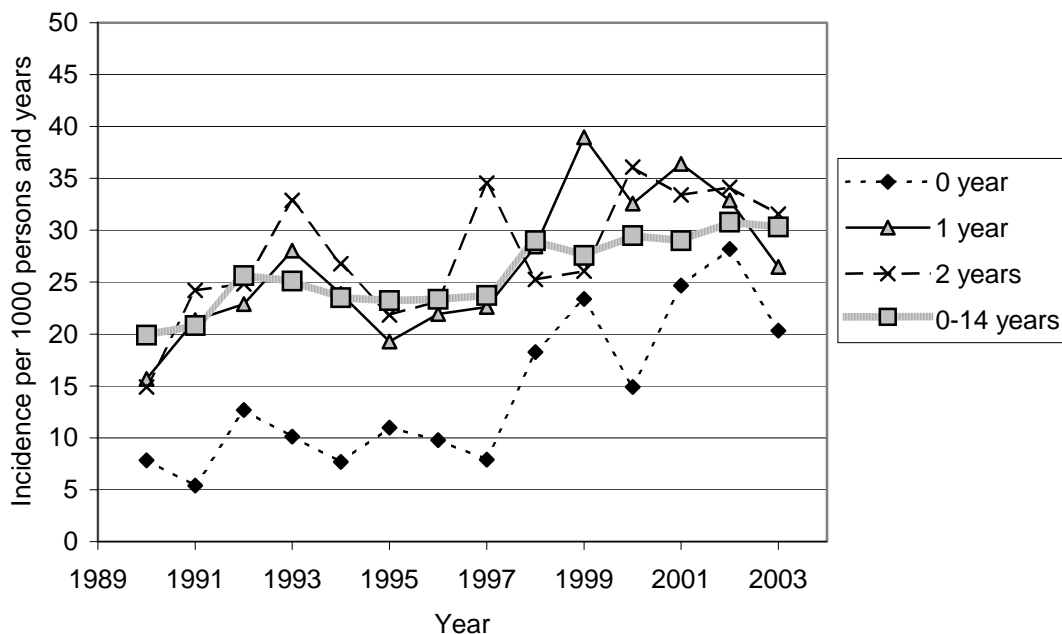
*The Department of Motor Vehicles.* Through its inspection of vehicles and driving tests the Department of Motor Vehicles contributes to improving traffic safety.

*New action plan for the Norwegian Public Roads Administration.* A new action plan is being prepared for the next four years for the activities of the Norwegian Public Roads Administration (2006-09). Traffic safety will be escalated in this period, including raising the frequency of spot checks on the roads.

#### Prevention of accidents in the home

*The public health nursing services* offer free follow-up of parents and children and advice and guidance to parents on preventing accidents involving children, adapted to the age of the child. Each

**Figure 3.** Incidence of moderate and serious injuries per 1000 persons and years after an accident in Trondheim for children 0-2 years of age and average for children 0-14 years of age.



child's personal health record has a checklist parents can use to prevent accidents in the home (10).

*Kit with brochures and safety equipment for homes.* A working group that includes public health nurses has compiled a special kit with brochures, checklists and safety products for the prevention of accidents in the home. The city health clinics began to use the kit in September 2003. The public

health nurse uses it to demonstrate home safety products and how to use them to prevent accidents. This initiative was initiated because of accident data for the years 1990 to 2002 from the injury register at St. Olavs University Hospital (Figure 3). Figures from this register indicated that there was an increase in moderate and serious injuries for the zero to two age group for this period. Already in 2003 we saw a reduction in the incidence of accidents involving toddlers.

*Teddy bear.* Since 1 January 2005 public health nurses have begun to issue a teddy bear inscribed "Hold me" to all new parents to remind them that babies are unable to understand the risk of injury if they fall, for example, off the changing table/bathinette, high chair and so on.

*Active coal in homes.* The public health clinics recommend that parents with children eight months of age or older should have active coal on hand to administer to their baby in case of poisoning.

*Safety for children.* In 1996 the local authority published a brochure to draw attention to safety in the home, day-care centres, schools and playgrounds (9). This brochure provides hints and tips on how to increase safety in such environments without impeding children's playing and learning possibilities.

*Prevention of falls among the elderly.* See "the elderly" under Indicator 3.

#### Prevention of accidents in day-care centres

*All playground equipment* in city day-care centres is inspected by Trondheim Real Estate which uses a detailed checklist. Their staff has been trained in application of the EU provisions for safety in playgrounds.

In 2004 the public health nurse working group got together with day-care centres to start collaboration on accident prevention for children in day-care centres.

#### Prevention of accidents in schools

*All playground equipment* in city schools is inspected by Trondheim Real Estate which uses a detailed checklist.

*Service agreement for sports equipment in schools.* Trondheim Real Estate has a service agreement with schools on permanently installing equipment in gyms. The agreement contributes substantially to increasing safety when using this equipment.

*The public health nurse working group* started work in 2004 on collaborating with primary schools on prevention of accidents among the youngest school children.

*Primary schools* in Trondheim practise systematic prevention:

- The Trondheim local authority undertakes training of bicycling skills in various traffic situations for fifth and sixth graders at the Eberg traffic-model facility (5; 6).
- The fire brigade can instruct pupils in lower secondary school on preventing fires in connection with their school inspections.
- *Traffic instruction for young persons* is an elective study in lower secondary schools in Trondheim (driving licence for mopeds)
- Swimming lessons and training for all pupils in primary schools.

*Working environment provisions for children:* New working environment provisions for children and young persons have been laid down in Chapter 9a of the Norwegian Education Act. The provisions cover both the physical and psychological working environment. The school system is working on determining what the act means for each school and SFO (the after-school programme), and in this connection relevant measures will be initiated to reduce the number of accidents.

*The programme for school health services* in primary/lower secondary school and upper secondary school emphasizes well-being, physical activities, proper diet and eating habits and saying no to tobacco, alcohol and drugs.

#### Other prevention of accidents in the city

*Preventing falls among the elderly.* Trondheim also focuses on preventing accidents caused by falls among the elderly. The local authority has long had a cooperation agreement with St. Olavs University Hospital concerning criteria for discharging elderly patients from the hospital, rehabilitation needs and cooperation with the geriatric outpatient clinic and other wards. A fall and memory outpatient clinic has been established at the hospital, and the city has established a special fall team and a resource centre for dementia. In accordance with given criteria, elderly persons prone to falling are examined by health personnel with a subsequent home inspection. (More details below).

*All drains* in the city are regularly inspected to check that all covers and gratings are adequately secured and do not present any other risks. Many ditches have been provided with safety grating.

Trondheim Public Works ensures that city streets and roads are safe and open summer and winter. One special challenge is to cut down the amount of dust generated by studded tires and gravel roads. Trondheim Public Works also ensures that the city's inhabitants have:

- *Good potable water.* Drinking water sources are protected and monitored to ensure good pollutant-free water before processing. Good drinking water is produced and distributed right to the consumer.
- *Clean water in the fjord.* Release of toxic substances into the sewage system requires continuous attention. The public sewage network has been improved so that run-off water is drained without environmental damage and problems for users. The cleaning plants ensure a clean fjord.
- *Nature and outdoor recreation for everyone.* We develop the natural environment and outdoor recreation areas around Trondheim with other organizations. Hiking and skiing trails are prepared for enjoyable walks and adventures in nature for as many people as possible.
- *Sports and playing facilities.* Recreational activities, sports and play require pitches, open areas and special facilities. The city cooperates with clubs and associations on operating sports and playground facilities, planning and facilitating for activities and initiating awareness-raising measures. The city also helps to carry out major national and international events.

*Early-development conditions for children and young persons.* The Planning and Building Act lays down that the local authority must appoint a special *representative* for planning that involves children and young persons. This representative has the right to speak and make proposals. The responsibilities and scope of the representative pursuant to this provision include all matters relating to the *physical* early-development environment and conditions, i.e. areas for play and activities, traffic safety, noise and pollution. In 2004 the representative for children in Trondheim has focused

on making dangerous school roads safer so that bussing needs are reduced, giving pupils back their road to school and reducing bussing expenses substantially.

*The fire and rescue service* runs the following regular annual campaigns:

- *Smoke alarm campaign* on 31 January every year
- *Fire safety weeks* – two weeks in September/October every year with varying fire-safety themes
- *Fire-safe Christmas celebrations* – arranged in November/December every year
- *Sea-sense campaign and school competition* for seventh grades every year at the end of May. The background for the competition is to train as many children as possible in sea sense to prevent tragic drowning accidents. Around 40 school classes in Trondheim can participate. The competition consists of a theoretical test and practical exercises at sea and on land.

*Universal design.* An overriding ideal in all planning in Trondheim is the *universal design approach*. The idea of designing surroundings to suit everyone is that everybody, regardless of functional disabilities, such as vision impairment, hearing impairment or movement dysfunction, can fully participate in society along equal lines with others.

### **Prevention of violence and bullying**

*Coordination of local crime-preventing measures (in Norwegian – SLT).* The Trondheim local authority has had an SLT coordinator in a permanent position since 1 February 2001. SLT is a formal cooperation between the Sør-Trøndelag county police district and the Trondheim local authorities. It focuses on the target group of children who are 12 to 18 years of age, and representatives of schools, the police, cultural institutions, child welfare services, emergency child welfare services, public health nurses, care services for children and young persons, the church and youth clubs meet on a regular basis. The focus is on particular places, groups or individuals, and measures are launched according to where problems may arise. Many measures have been initiated in the last three years, and many "simple" measures have been effective.

*The Trondheim local authority and MOT (anti-bullying campaign)* has entered into a cooperation agreement that will last until 2006. The purpose is to cooperate on measures to reduce bullying and violence among children and young persons.

*Midtbyen (Downtown) – safe and enjoyable.* The Trondheim local authority, the police and Central-Norway Chamber of Commerce are cooperating to combat violence, vandalism and littering. The aim is to reduce the scope of violence and vandalism downtown by 15 percent. The police lowered the threshold for tolerance to tackle a substantial number of problems. There will also be more police in uniform present in the streets in the evening and night, and if necessary, offenders will be fined on the spot. We will also be installing many more waste baskets in the city centre.

*Volunteers* also contribute a great deal to keeping the city centre clean.

*Ansvarlig vertskap (Responsible hosting)* is a cooperation project with the restaurant business to reduce violence stemming from drunken revellers on weekends. Measures include staggered closing times and training doormen.

*Natteravner (Norwegian version of Guardian Angels)* patrol the streets every Friday night and some Saturday nights to help children and young persons who are out on these nights. The idea is to provide assistance to those who need it whatever the problem. Such situations call for good

judgement, a compassionate attitude and care. Contact with the assistance services can also be arranged for those who need it.

### Violence and bullying in schools

The City Executive Board finds it intolerable that pupils should feel unsafe on their way to or from school and in 2004 pointed out that there must be zero tolerance of bullying and violence in schools in Trondheim, and that the necessary resources must be spent on this. The City Executive Board has requested the Chief City Executive to prepare an overview of the measures that have been implemented and need to be initiated to address this situation.

*Inclusive school.* Trondheim is developing the concept of the inclusive school as an overarching aim for the Programme for Quality Development of schools in Trondheim (2003 – 2006). The programme is compulsory for all schools, and staff members at the schools will receive training in methods, teaching and approaches that will ensure more adapted instruction for each child. The children and family services are also participating in some of the efforts, particularly where the target group is vulnerable children. This will ensure a common understanding of attitudes and common knowledge about bullying and other important issues.

*Primary schools* in Trondheim are systematically working to prevent bullying and improve well-being through:

- Big brother/big sister schemes
- Mediation solutions between pupils
- Class management focusing directly on interaction between children and adults and using video film as a method to collect data
- "We care" focuses on harassment issues in particular and the role of the adult when it comes to developing children's self-esteem and perceived recognition
- Project to reduce bullying in primary school, based on the Olweus project
- Agenda against bullying
- Pupil council activities focusing on pupil cooperation
- Pupils are included in the working environment group (cf. section 9a of the Education Act)
- Conflict board in primary/lower secondary school
- Central pupil council soon to be replaced by the children's city council

Many schools in Trondheim are also actively working on various schemes to take school outdoors. The challenge for this is to test how nature around the school can be used actively in the teaching and learning and also accustom children to be outdoors in all kinds of weather.

*Elevinspektøren (Pupil Inspector).* The "Pupil Inspector" is an annual survey of pupil well-being and learning. The findings from these surveys are discussed with all relevant cooperation partners and form the basis for measures against bullying.

### Violence against women

Women who are subjected to violence, abuse or rape or who need information about their rights and possibilities for support may inquire at the agencies/organizations/services in Trondheim:

*Refuge centre for abused and raped women in Trondheim.* This centre aims to assist women who have been physically and mentally abused or raped. The refuge can also refer persons to a lawyer for assistance.

*The rape reception centre at St. Olavs University Hospital.* The gynaecology ward at St. Olavs University Hospital offers support, a medical examination, treatment and follow-up if needed. If a woman wishes to report abuse to the police, the rape reception centre will secure evidence.

*The medical emergency centre at St. Olavs University Hospital.* The acute ward receives women who have been subjected to violence and abuse. Treatment is given for injuries and pictures are taken if the violence is to be reported to the police.

*Sør-Trøndelag police district.* The police can offer advice to victims of violence. If violence is reported, the police will investigate the case. The police can also assist if the abuse is repeated, for example by providing a personal alarm and issuing restraining orders.

*The child welfare emergency service.* Persons under 18 years of age may contact the child welfare emergency service at the police station for assistance.

*Anger-management project.* Sør-Trøndelag mental hospital, the Brøset ward, offers help for men with violence and aggression problems.

*Free legal aid.* Anyone who has been subjected to violence or rape is entitled to free counselling by a lawyer, whether or not the incident has been reported to the police.

### **Increasing physical activity**

More physical activity improves strength, over all conditioning and coordination, thus reducing the risk of accidents involving falls.

*Physical activity at school.* The Trondheim local authority has requested heads of primary school and upper secondary school to ensure that all pupils in schools have at least one hour of physical activity each school day. Six primary schools in Trondheim are developing models for this focus on physical activity and school meals. Nutrition and physical activity contribute to improving the psycho-social environment in schools, including behavioural problems and bullying.

*Understanding the body and learning in upper secondary school* aims to make pupils more active and more aware of their bodies and to improve their self-image. This is to be attained by adding a physiotherapist to the school medical service. The physiotherapist will supplement the school nurse by focusing on physical movement in preventive activities at school. The project was evaluated in 2004, and starting in the autumn of 2004 it has been a part of the programme the school medical service offers pupils in upper secondary school.

*FYSAK.* By participating in FYSAK, the local authority cooperates with various communities and NGOs on arranging more physical activities for the population in Trondheim. Initially the 30 to 60 age group will be given priority.

*City plan for sports and outdoor life 2005-2012 with an action plan for 2005 – 2008.* This planning document has combined plans and measures for the administrative areas of sports, outdoor life and green structures in one plan. This shows the local authority's focus on and commitment to sports and outdoor life. Outdoor life is the most important source of physical activity for the population, and increased physical activity is an important factor for improved health and well-being.

*Measures for increasing physical activity*

- *Today's trail.* Skiing trails marked out for everyone to enjoy.
- *Preparation of trails in Bymarka.* 33 km of ski trails are prepared every weekend in the winter.
- *Skate boarding.* An old parking garage for trams is used for skate boarding.

*Measures for increased physical activity arranged by others:*

- *The Wednesday workout.* Walking in the forest on foot or skiing in the woods.
- *Head for the hills.* Hiking programme in the summer.
- *The Sunday trip.* Hiking programme in the summer.
- *Senior trim +55.* The aim of the project is to get people to increase their physical activity on an everyday basis.

**Reduce drinking and drug abuse everywhere**

*The action plan for Trondheim's substance abuse policies for 2003 – 2006* was approved by the city council.

*Primary/lower secondary schools in Trondheim* have a continuous "say-no" anti-smoking campaign ("VærRøykfri"). One of the aims is to make young persons aware of the necessity to look after their own health and dare to make their own choices regardless of peer pressure.

**Other long-term activities important for a safer city**

*Swimming instruction is given in Pirbadet.* This is a large swimming pool with a range of facilities including diving boards, seven pools, a climbing wall, sauna, four tanning parlours and a café serving hot and cold dishes. *Pirbadet* offers swimming lessons or swimming training to the following groups:

- Babies, where the aim is that a baby shall feel safe and manage to stay afloat
- Children from one to five. *Pirbadet* arranges swimming lessons for children under the school age in conjunction with the Swimming Association, the Norwegian Olympic Committee and Confederation of Sports and Dronning Mauds Minde college
- Adults who cannot swim
- Swimming lessons for children and young persons
- Swimming for 15 schools in Trondheim. The remaining schools have swimming instruction in other swimming pools in the city.

*The project Children's Green City in Trondheim* is to inspire, motivate and support day-care centres and schools to work on sustainable efforts with creative ways of facing environmental challenges. In this way, children and young persons are actively participating in a social development that ensures a good quality of life. The annual Children's Green City Day in 2005 will be arranged on 16 September 2005 in the city square. Awareness-raising activities to prevent accidents, violence, bullying etc. may also be included in this project.

*Environmental certification of schools (Green Flag).* ECO schools through FEE (Federation for Environmental Education). Areas where schools or day-care centres may be certified in include school meals and physical activity, source sorting/recycling/consumption, ecological food/nutrition, animal husbandry, energy saving, anti-smoking, well-being in the school or day-care centre, both in the indoor and outdoor environments.

*Recreation and social activities.* Information about these programmes and which of these have been facilitated for persons with needs for various types of assistance can be obtained from the database that is accessible on the Internet ([www.fritidenmin.no](http://www.fritidenmin.no)).

*Adapted recreation* aims to help all functionally challenged persons find cultural and recreational activities based on their own wishes and needs.

*Voluntary Centres in Trondheim* establish networks for the elderly, neighbourhood assistance and various activities for children, and are also local resources for promoting health and well-being in the city districts they operate in.

*Neighbourhood police.* The neighbourhood police model aims to have policemen back walking the beat, not only driving by in their patrol cars.

*Sports clubs* in Trondheim are run on a voluntary basis for around 5000 to 10 000 children and young persons. We support the sports clubs by allowing them free use of gyms in schools and other indoor facilities.

*Get children and young persons off the streets.* Sports clubs, recreation clubs, marching bands, cultural activities, the music school and so on contribute in various ways to giving children and young people meaningful recreational activities that get them off the streets.

### **3. Programmes aimed at high-risk groups and environments and programmes promoting safety for vulnerable groups**

Below we describe a number of activities focused on high-risk groups of various ages. The description of each age group describes measures focused on vulnerable groups such as immigrants, refugees and pupils who are subjected to bullying.

#### ***Children and young persons***

*Guidance telephone for young people on substance abuse.* Trondheim has established a guidance telephone for young people on substance abuse. This telephone service is staffed by "Ungdomsbasen" (the Youth Base) during regular working hours. In evenings and on weekends calls are forwarded to Sør-Trøndelag police district and to the emergency child welfare service. This telephone service is for young persons who have problems, and also for young people and adults who are worried about individuals or youth milieus. If the caller agrees to it, contact can be established with agencies in the city for possible assistance in the case in question.

*Refugee guide for young persons.* In the autumn of 2004, in cooperation with the Red Cross and NTNU (the Origo centre), the local authority (through heads of school, the SLT coordinator, the Chief City Executive) and the police, started a pilot project through which young persons served as guides for refugees. This is organized as an elective study in a lower secondary school where the aim is to allow young persons through their own network to guide recently arrived young refugees in their first encounters with Norwegian society.

*Youth contracts.* Sør-Trøndelag police district, represented by the police department in central Trondheim, and Trondheim local authority have since 2001 been part of a youth-contract pilot project initiated by the Ministry of Children and Family Affairs and the Ministry of Justice. These are agreements between a young offender with consent from his or her parents or guardians on one side, and the police and local authorities on the other. The young offender contracts to undertake specific activities for a specified period of time, in return the legal authorities do not initiate further legal proceedings. One condition the police insist on is that the young offender must not commit punishable offences for a stipulated period of time (probation). The aim of the contract is to motivate and assist the young offender to stay away from crime and establish a regular life within the framework of the law. The scheme also enables the young offender to pay his or her dues by compensating for damage he or she has caused. It is a requirement that the young offender is willing to sign the contract and also assume substantial responsibility for fulfilling the terms of the contract. The project period expired in 2003, but pending a change of the act, all cities participating in the project may continue this practice. The Ministry of Justice and the Ministry of Children and Family Affairs have recommended to Parliament that youth contracts be established as a permanent scheme (substitution for other forms of punishment) in the whole country.

*Vulnerable young persons.* In 2001 the SLT coordinator started a project in cooperation with the Bergen Clinic (Magne Raundalen and Reidar Hjermann) focusing on boys whose native languages are not Norwegian and for whom there was some measure of concern. This project is now in regular operation.

*Mental illness among children and young persons.* A cooperation agreement has been entered into between the Institute of Psychology and a school in Trondheim on a project related to mental illness among children and young persons. Majors students from NTNU are planning the project together

with the school and also participating as supervisors during the implementation. The aim is to provide pupils with increased knowledge and insight into issues related to mental health.

*The project "Children of mentally ill parents"* offers group therapy to young persons whose caregivers are mentally ill.

*Facilitated recreation.* The primary aim of the project "Facilitated recreation" is that each and every functionally disabled person shall have access to cultural and recreation activities based on their own needs and wishes. We will survey the wishes and needs for individual recreation, and plan and initiate recreational activities. The most important tools for this include outreach assistants and recreation assistants, escort certificates, various transport schemes, voluntary work and a comprehensive overview of the cultural and recreation choices in Trondheim.

*Health clinics* for children and young persons up to 20 years of age are also working on substance abuse among young persons with a view to getting them to reject the idea of starting to smoke, and also to postpone their initial contact with alcohol.

*Together against substance abuse.* Due to a number of deaths of young people in the summer of 2001, an interdisciplinary and interagency group called "Together against substance abuse" was convened to review all aspects of rehabilitative counselling and substance abuse in Trondheim. Fourteen working groups examined this problem. The groups were composed of experts from all relevant agencies and professional institutions, and they were asked to examine various themes and issues and propose solutions.

1. Health team
2. Crisis team
3. Somebody dies
4. Crisis shelters for young persons
5. Detoxification and treatment programmes for young persons
6. Parent groups
7. Counselling telephone
8. Interdisciplinary committee
9. Groups in schools for prevention of abuse of intoxicating substances were left to the MOT foundation
10. Coercion
11. Individual plans – coordination
12. Health clinic for substance abusers
13. Comprehensive plan for the work against substance abuse
14. Overdose cases

Overdose deaths in Trondheim have dropped dramatically in 2004 after this programme was launched.

*The Trondheim local authority and MOT* have entered into a cooperation agreement that will last up to 2006. The SLT coordinator is the contact person for MOT in Trondheim. MOT is a charitable and nationwide foundation aiming to create a better and safer early-development environment so that the quality of life of young people is increased, and bullying, violence and substance abuse are reduced.

*Coordinated efforts against vandalism and tagging* have led to a major decline in recruitment into these milieus.

*Lade (a district in Trondheim) treatment centre* started the project "From taboo to openness about substance abuse" in the autumn of 2001. The three-year project is funded by the Health and Rehabilitation Foundation. The project offers programmes to the local authorities in the central Norway health region. Children of substance abusers are included in programmes to prevent injuries related to their habit. A specific aim is to enhance the skills of health and social care workers when having conversations with pregnant women and parents of small children about substance abuse as a harmful factor that hampers development in the lives of children (Lade Treatment Centre (Blue Cross)).

### **Adults**

Mental health is included in the application because mental disorders/problems may lead to suicide, substance abuse, crime, violence and accidents.

*The escalation plan for mental health 1999 - 2006* assumes that the user perspective will be used for planning, organizing and operating services. The project *User asks User* contributed to preparing a strategy and expertise for user participation and user control in Trondheim. This measure was embedded in the escalation plan for mental health.

*Trondheim's psychiatry plan for 2002-2006* sets the aim that the local authority will include user cooperation on both the individual and system levels when designing services for the target group. The local authority shall give priority to preventive mental health activities by facilitating various programmes so that individual inhabitants may cope with their own life situation on their own to the greatest extent possible.

*Doorman course.* The police in Trondheim arrange courses for doormen at selected restaurants in central Trondheim where experience shows us that there are many cases of violence. If a restaurant does not comply with the request to participate at compulsory courses for doormen, its licence may be revoked. In connection with the courses, we are considering a scheme whereby records would be checked to uncover any illegal conduct or any incidents of violence in the background of candidates for employment as doormen in restaurants/bars.

After the course, doormen are expected to be better at handling conflicts, better at refraining from discriminatory practices and keeping aggressive tendencies in check.

*HOME-START, the family contact* is a person who provides assistance and support in a family's home. A family contact visits the family two to four times a week. Family contacts are parents themselves and attend a course and receive guidance as long as they are serving as a contact and visiting the family. Through HOME-START, the family contact arranges trips and social events for families and the voluntary workers.

*Stavne Gård* (Stavne farm) is an enterprise run by the local authority that provides work-training measures for Aetat (the employment service) and which also provides social services on behalf of the Trondheim local authority. All participants are to be given the opportunity to better master their own lives as they get a sense of belonging at a school or in a job, housing and recreation, the opportunity to actively use their own resources and develop positive values and qualities. Stavne Gård is a programme for young adults who would like to work actively with their own problems that prevent them from coping in a regular job.

*Development programme for family-support activities in Trondheim 2002 - 2007.* Parents are the most important factors in a child's life. The family is one of the backbones of a successful society and is fundamental for a child's growth and development. Trondheim's family-support efforts aim to contribute to ensuring good early-development conditions for toddlers and young children through early and correct intervention.

*Persons with psychological disorders* must have quick and easy access to treatment and rehabilitation to reduce functional problems as much as possible. The Trondheim local authority shall ensure that persons who have lasting functional problems receive an appropriate housing and care programme. We shall establish up to 80 new housing units for the target group during the planning period.

*The low threshold psychiatry programmes* in each city district offer follow-up and support.

*The day programme at Lerkendal* provides a challenging and rich programme for adults who are on a disability pension and live in the Lerkendal city district. Activities are based on individual interests, wishes and needs. The aim is to facilitate and stimulate personal growth for each individual so that each and every person has a meaningful life. This programme has the following two centres:

- *Fossesenteret* offers production of firewood, textile work and packaging assignments for outside companies as well as miscellaneous tasks for the city archives. The centre also have a developing group focusing on trips and activities.
- *Gildheim* work and training centre offers production of firewood, textile work and packaging assignments for outside companies. They are also helping with more and more tasks at the Leangen trotting track. In cooperation with the Voluntary Central and Norwegian People's Aid they operate a neighbourhood café and they also collect clothes, toys etc. that are packed and shipped to orphanages and needy persons in Russia.

*The Viktoria family centre* is a child-care institution for pregnant women and small babies with parents who are in a difficult life situation. These may be parents who have substance-abuse or psycho-social problems, who are mentally challenged or immature, or who have a combination of these factors. The centre's aim is to give parents assistance so they can care for themselves and their family and ensure that their child has good development. A good start for the child during pregnancy and the first years of life is decisive for children's growth and development. Strengthening parental competence is important in all work (the Trondheim local authority, Child and Family Services).

*The health and welfare service in Midtbyen* provides follow-up of services for the travelling health team for substance abusers, the public health clinic for substance abusers and the activity centre for substance abusers. It is intended as a low-threshold programme issuing needles and syringes, caring for injuries, testing for illnesses and so on.

*The health clinic for pregnant substance abusers* was established to give this group assistance during their pregnancy.

*Gryta* is a new programme for adults with substance-abuse problems. It does not matter where the abuser lives or whether he or she is using services supplied by the local authority. Anyone who wishes may join the programme. The idea behind the Gryta programme is to create a meaningful existence for persons who are more or less permanently excluded from participating in regular organized recreation programmes. Employees at Gryta will work to improve the quality of life for the persons in question. No demands are placed or expectations set as to behaviour. Participants will

not encounter prejudice. Users shall be allowed to develop their own resources and participate in recreational activities they can master.

*Detoxification clinic for male substance abusers.* In cooperation with the police, the Trondheim local authority is establishing a detoxification clinic for male substance abusers who are currently being held in prison cells. Trondheim has been granted funding for a pilot project to establish a programme for a group which the police are now spending substantial resources on, but which is not really the responsibility of the police. The aim is that substance abusers who can think of nothing else but their next fix, and mentally ill persons shall be treated with dignity by trained personnel.

*SmI – the Centre against Incest* for the county of Sør-Trøndelag was launched in October 1996. SmI Sør-Trøndelag is an autonomous foundation with offices in Trondheim. SmI aims to help men and women above the age of 18 who have been subjected to incest to help themselves, and to provide help to their families and the assistance services. SmI has around 800 registered and anonymous users, and in 2003 they received around 3000 inquiries.

Activities:

- The centre works on the prevention of sexual abuse by pointing out and combating social conditions that legitimize, support and maintain abuse
- The centre distributes information about incest/sexual abuse and the situation for those who have been subjected to incest and shares its competence with relevant agencies
- The centre promoted preventive child welfare through outreach activities at assistance services/schools and so on

### ***The elderly***

*The Info Centre* has senior citizens as its target group. This centre provides senior citizens with general information about health-promoting and preventive measures, and answers questions from and about the elderly. The centre is currently making house visits to all 75-year olds in the Nardo district to talk about preventive measures, including the prevention of falls.

*The parachute project* aims to raise awareness and improve knowledge that physiotherapists have about documented risk factors related to the elderly and falls and to provide updated knowledge about intervention focusing on the elderly. This is now being taken into use in clinical practices for the elderly. The project manager and employees come from the programme for physiotherapy training at the University College of Sør-Trøndelag and the geriatric ward at St. Olavs University Hospital.

*Prevention of falls - focus on the elderly and physical activities.* This project started in 2005 with funding from the Health and Rehabilitation Centre, and involves experts from the geriatric ward at St. Olavs University Hospital, the Physiotherapy Services Office, the Culture and Recreation Department, the Pensioners Confederation and the physiotherapist education at the University College of Sør-Trøndelag. The aim is to catalogue physical activities for the elderly with incipient functional disabilities and to find out which senior citizens use the activities. Through network activities the aim is to establish better interaction between the public authorities and NGOs. A model is also being developed for training groups to work on the prevention of falls, including training instructors for such groups.

*The fall prevention project* is a collaboration project between the outpatient clinic at the Geriatric Ward at St. Olavs University Hospital and Trondheim local authority's medical service, the physiotherapy service and the ergonomist service. The work includes:

- Assessment of the patient by the GP
- Interdisciplinary clinical examination of patients that are prone to falling (The fall clinic) at St. Olavs University Hospital.
- A pilot project in 2003 with earmarked positions for physiotherapists and ergonomists to follow up senior citizens who live alone and are prone to falling
- Starting on 1 January 2004: permanent fall teams with a physiotherapist and ergonomist in each city district

*Contingency teams* follow up patients after hospitalization. Fall injuries are one of several focal areas. Persons who come under the combination of cognitive failure and proneness to falling comprise an important group. Activities include prevention of new fall injuries.

*Fire protection coordinators* undertake continual activities for quality assurance and training of fire protection for nursing homes and home nursing (sheltered accommodation-shared housing-sheltered housing-staff). They also assist managers/department heads with drawing up a contingency folder. Fire protection coordinators in nursing homes also work on other safety measures, such as keys linked to identity and aid-call signalling. Statistics show that senior citizens are overrepresented when it comes to fire hazards. The fire protection coordinator for home nursing has offered all the home nursing districts in Trondheim free fire protection training of their employees. This is in addition to the annual statutory courses employees in sheltered housing units receive. There is also an aim that all employees at respite centres for the elderly will be offered this course.

Fire protection coordinators have also arranged special courses for physiotherapists and ergonomists in the city.

### **Other activities for high-risk groups, the environment or vulnerable groups**

*Noise problems.* Noise in the environment where children are, such as day-care centres, schools, discos and concerts may result in hearing loss. Special provisions may be needed based on international rules in connection with events such as concerts to prevent hearing impairment.

*The number of young prostitutes* in Trondheim was surveyed in 2004. Measures have been initiated to address this problem in venues where girls down to 13 years of age are involved in prostitution.

*The health and overdose team* aims to undertake injury-reducing and health-promoting activities among heavy substance abusers to reduce the number of overdoses and to put a stop to overdose fatalities. The aim is to attain this by being where the abuser is, by being non-bureaucratic, i.e. being a low-threshold programme, and by always being available during working hours etc. The overdose team will also react and assess the situation, inform and follow up the patient and others when contacted by AMK – the Acute Medical Communication Central. They also continue their follow-up when necessary or desirable.

*Support centre for victims in criminal cases.* This project involves cooperation between the Trondheim local authority, Sør-Trøndelag police district and the Trøndelag public prosecutor for 2004 to 2006. The project offers support, someone to talk to, practical assistance, parental support

and legal support for persons who have been subjected to various types of abuse and physical injury. These include violence, sexual abuse, robbery and serious traffic accidents. Support is also offered to the next of kin of persons who have died after a crime.

#### **4. Programmes for documenting the frequency and causes of injuries**

Generally there are two purposes behind registering injuries: *Monitoring what types of injuries occur, and finding out where they occur and which measures should be initiated to prevent them.*

To prevent accidents we need to have the facts on the following stages of the accident:

- When did the accident happen?
- Where did the accident happen?
- What was being done when the accident happened?
- What went wrong?
- What caused the injury?

Documentation and analysis of accident data are important steps in preventing accidents among the population in general, the most vulnerable groups, environments and situations.

##### ***Registration of accidents in a local injury register***

Most accidents in Trondheim are treated at St. Olavs University Hospital or the emergency service at the same hospital and have been registered in an injury register up until 2004. This register has now been discontinued, but it is expected that a new paper-based system for registration of injuries will be in place early in 2005 and a similar journal-based system will come a little later. The Trondheim local authority is assuming the responsibility for emergency medical services as of 2 May 2005, so that it will be useful to have a journal system based on a common minimum data set in place as quickly as possible after the takeover. We are cooperating with the Directorate of Health and Social Affairs on establishing the new injury register, and the data collection will be based on the same common minimum data set that is being drawn up for the national injury register that will be in use as of 1 January 2006.

The plan is to draw up standardized reporting of injury data based on recommendations given in the "WHO guidelines for conducting community surveys on injury and violence" (10). These data must be reported in a manner that provides a good overview of the injury situation in Trondheim, and may also be used for targeted planning and implementation of preventive measures. From 14 to 16 September 2005 Trondheim shall host the "1st Conference on Injury Surveillance", and much positive input is expected as to how injury data can be used for monitoring purposes and not least for prevention.

In earlier systems, localization of the site of the injury has been inadequate or not very useful (11; 12). Localization must be accurate enough that we can propose physical measures at given points. To accomplish this, accidents should be registered online and preferably using digital geographical maps. When the new injury registration system is established, it will be important that this includes registration of the injury site with geographical coordinates.

After the establishment of the injury register in the middle of the 1980s, a number of research studies have published their findings in national and international magazines. These deal with both demographical health aspects and also more specific aspects such as traffic accidents and home accidents among children and the elderly. Some doctoral theses have also been written on this theme, using data from the injury register in Trondheim.

Based on data from the injury register, MLE (the environmental and agricultural unit) in Trondheim has published a number of reports and brochures on accident prevention (7; 9; 13-21). MLE has a

website ([http://www.trondheim.kommune.no/psmaler/tekst\\_og\\_bilde.asp?thisId=978190201](http://www.trondheim.kommune.no/psmaler/tekst_og_bilde.asp?thisId=978190201)) with information on accidents.

In 1989, a study was carried out to determine how hospital-based data may be used for traffic safety purposes. The project concluded that the data could be used on three different levels: (I) examining traffic accidents in relation to other injury areas, such as homes, school and workplace, (II) acquiring knowledge about *all accidents* that occur on roads, i.e. defined traffic accidents involving vehicles and, for example, accidents caused by slipping on ice (III) comparing the traffic accidents registered by the hospital with other accident registers (22). Needless to say, many problems touch on all these levels. Future research that will be interesting in this context includes the suitability of the data in relation to (a) studies of traffic accidents focusing on the hospital, police and insurance, (b) effect studies, (c) costs analyses, (d) epidemiological studies and (e) studies of accidents involving slipping/tripping on ice.

#### Accidents involving pedestrians and bicycles

In 1996 a study was made of single accidents involving bicyclists and pedestrians to determine how the findings about injuries and accidents might be used in local prevention activities (23). The study concluded that the findings might be used to: (I) Pinpoint on maps the sites of accidents involving bicyclists and pedestrians. The quality of the data has proven to be relatively high. (II) Provide data on under-reporting in public statistics. This applies in particular to the police register of bicycle accidents, in addition to pedestrians who slip, stumble etc. It is pointed out that if the registration procedures are improved, the data in the future will be suitable for: (III) Serving as a basis for making decisions/choices and setting priorities with respect to preventive and injury-alleviating measures, (IV) helping to study the effect of preventive measures, and not least (V) improving interagency cooperation on local safety. Improvements that are necessary include that *all injuries and accidents* are localized geographically on digital maps, and that the registration personnel have direct contact with patients (located in the "natural" flow of patients).

From 1 October 1999 to 30 September 2000, 488 bicyclists who were treated at the injury ward at St. Olavs University Hospital were interviewed about the events leading to their injury. Most injuries involving a bicycle occurred during the summer months, evenly distributed on all weekdays, and generally in the daytime. The bulk of bicycle accidents were accidents involving a cyclist and no other party (11). The report lists the following proposed fields where improvement might reduce the number of bicycle accidents:

- *Improved registration* of the site of the accident. Physical measures at accident sites require better registration schemes at the hospital
- *Good quality of data* will provide a better basis for many types of measures
- *Road and street design* – for example, special bicycle lanes, better crossing points, the colour of bicycle lanes, signs and marking, curbstones and surfaces
- *Bicycles* – for example brakes, tires and lights
- *Human error* – for example using helmets, biking under the influence and other violations
- *Clearer rules for bicyclists*

The relationship between the number of bicycle accidents reported by the police and the number of accidents registered at St. Olavs University Hospital was around 1:10. Accidents involving more than one person or types of vehicle dominated in the police reports, while accidents involving a single person dominated in the hospital reports. The accidents reported by the hospitals showed that the accident situation was quite similar in Trondheim, Drammen and Harstad (5).

Over a period of five years pedestrian and bicycle accidents reported to the police in Trondheim, Lillehammer and Vingrom were compared according to a classification of safety on the roads in relation to actual traffic speed (under/over 30 km/h), one or more lanes and pedestrian needs for crossing the street. Looking at the physical conditions, areas were classified as "measures not required", "measures required", or "measures required immediately" (cf. Swedish report). The classification of physical conditions compared quite closely with accidents involving bicycles and pedestrians reported by the police in urban environments, but not for urban environments where the traffic speed was more than 30 km/h (12).

#### Accidents in homes and immediate neighbourhoods

From 1990 through 2002 there was a steady increase in the annual incidence of accidents with moderate and serious injuries among children between 0 and 2 years of age in Trondheim (Figure 2). For children 1 to 2 years of age, the incidence of moderate and serious accidents increased from 1.5% to 3.4% from 1990 to 2002. For children in their first year of life there was an increase in the annual incidence from 0.8% to 2.8% from 1997 to 2002. Around 78% of all accidents among children 0 to 2 years of age occur in their home or close to it (24).

An overview has also been drawn up of the incidence of accidents with moderate and serious injuries for three-year children groups 0-8 years of age (Figure 4) and children 9 to 17 years of age (Figure 5).

For all three-year groups from 0 through 8 years of age Figure 4 shows that there has been a steady increase of moderate and serious injuries, even if the incidence of accidents has remained stable on the same level for the whole period from 1990 through 2003 (Figure 1).

**Figure 4.** Incidence of moderate and serious injuries per 1000 persons and year for three-year age groups; 0 through 8 years of age

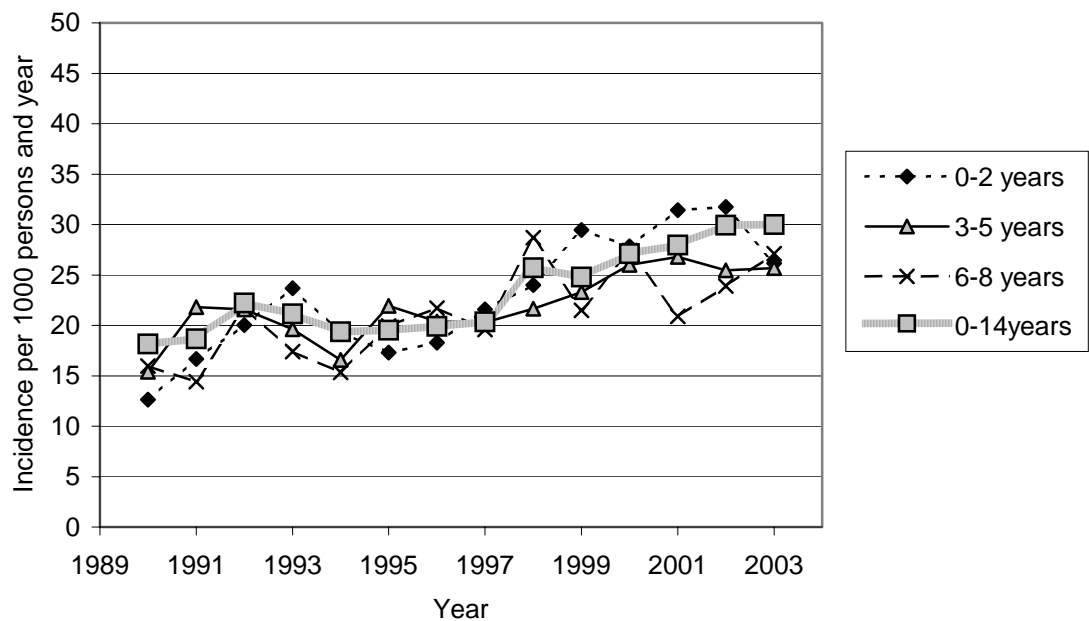
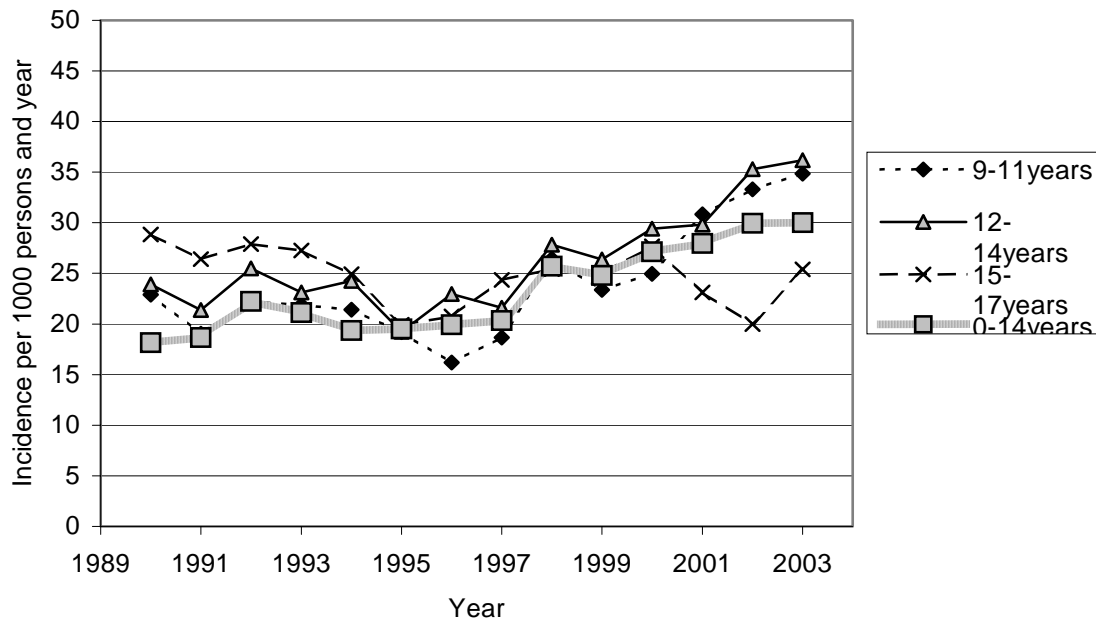


Figure 5 shows that there have been great fluctuations in the incidence of moderate and serious injuries among children from 9 to 17 years of age. Early in the 1990s there was a slight decline in the

**Figure 5.** Incidence of moderate and serious injuries per 1000 persons and year for three-year age groups; 9 through 17 years of age



incidence for the 15 to 17 age group, while there have been some fluctuations from the middle of the 1990s.

The incidence of moderate and serious injuries hovers around 2.5 to 3.5% per year, which means that for Trondheim, annually, 50 to 70 children in each age group are victims of accidents leading to moderate or serious injuries.

#### Other programmes for documenting the frequency and cause of accidents

The Norwegian Public Roads Administration has its own traffic accident register based on reports from the police. This register contains data on all reported road traffic accidents involving personal injuries since 1977. The level of detail is relatively high, enabling us to prepare quite comprehensive statistics on road conditions, vehicle conditions and personal data. The local authority generally uses data from this register when working on traffic safety.

## 5. Evaluation of programme processes and the impact of changes

There have been two doctorate studies at the University of Trondheim about injury and injury prevention. The topics of the studies were traffic accidents and their consequences, a study on injured road-users treated at the Regional Hospital of Trondheim by Inggard Lereim in 1984 (25) and Injury registration as a tool for accident preventive work by Ylva Sahlin in 1990 (26).

***Vulnerable young persons.*** In 2001 the SLT coordinator commenced a project in cooperation with Bergensklinikken (Magne Raundalen and Reidar Hjermann) focusing on ten boys whose native languages were not Norwegian and for whom there was a degree of concern. The project is evaluated by SINTEF and the report will be published 20th June 2005 (27). The boys were 15-23 years of age and were from Africa, Iran, Irak and South America. They had developed anti-social and criminal behaviour. The project is now passing into regular operation and has so far shown very good results. The youth have now put realistic aims for the future and have improved social behaviour. They have dwellings or have moved home. Three boys are working at farms, four are attending college, one is working and one is paying the penalty of a crime committed before the project started. The boys committed eleven crimes in 2001 before participating in the project. They did not commit any crime in the first six months of 2003.

***Mobilization conferences.*** In 2002 Trondheim was invited to join the Central Norwegian Competence Centre's Combating Substance Abuse project. The aim is to create safe early-development conditions for children and to raise the drinking debut age. Together we want to mobilize everybody who is working in outreach programmes for children and young persons to create a positive milieu for the young. In 2003 we arranged mobilization conferences looking at substance abuse as a social problem, and looked into local challenges for children and young people. Attendance at the conferences was high, with participation from the County Governor, the police, NGOs, pupils and parents.

As much local data as possible was collected to describe the current status for the network of parents with young children and access to help, looking at such indicators as accidents, bullying, absence from school and vandalism. Today's status is the basis for mobilizing all forces to influence and reverse unfortunate trends and create a better local community.

The SLT coordinator has included the measuring and mobilization tool "Outcome accountability" in this project. The aim is to measure the effect of the efforts. This involves looking for indicators that can be measured and charting development trends over recent years. Knowledge of what trends are prevalent and how the trends have developed will make it possible to mobilize efforts to reverse negative trends or reinforce positive trends.

***Responsible host.*** The Trondheim local authority is collaborating on this project with the Central Norwegian Competence Centre's Combating Substance Abuse project in conjunction with the Directorate of Health and Social Affairs, the Norwegian Hospitality Association (RBL), the Hotel and Restaurant Workers' Union (HRAF), the City of Trondheim Legal Services Department, the SLT coordinator, the Student Welfare Association and the police. The aim of the responsible-host project is to reduce violence stemming from drinking and substance abuse that can be attributed to people being served too much alcohol and to minors being served in pubs and restaurants in Trondheim. The responsible-host project is as a quality label for restaurants and pubs. This step has been taken because alcohol-induced violence is a major factor in the total cases of violence. In 60 to

80 per cent of the cases of violence the perpetrator or the victim is under the influence of alcohol. Many of these cases occur in or around pubs or restaurants. Research shows that measures such as "Responsible Host" influence the way pubs and restaurants deal with difficult situations and how they practise legislation on serving alcoholic beverages.

The restaurant workers attending the courses were very satisfied. The restaurants, the police and the city of Trondheim have a joint responsibility to prevent retailing liquor to juvenils and violence due to intoxication downtown.

Experience from responsible-host projects elsewhere in the country shows that the knowledge and competence of employees and managers in pubs and restaurants have increased, the cooperation between pubs and restaurants and the city authorities has improved and that violence and reports to the police have declined.

SIRUS is responsible for evaluating the responsible-host project in Trondheim.

***Prevention of accidents among children 0 to 2 years of age*** has priority at health clinics, and in 2003 a working group developed a course for public health nurses in Trondheim for prevention of accidents among children 0 to 2 years of age (8). Themes included accidents in and around the home and buckling up children when they are riding in cars. A kit with brochures and safety equipment for accident prevention for children was produced for this purpose. The kit is to be used by the public health nurses at health clinics when giving advice and guidance to parents of small children on accident prevention. Each health clinic has one or two kits.

Data from the injury register are used to study the effect of prevention measures. Preliminary accident figures for 2003 suggest a trend toward a reduced number of moderate and serious injuries among children 0 to 2 years of age. Data of injuries for 2004 are not yet available. In 2005, a new register of injuries is established. In 2006, the evaluation of the program will continue.

***Teddy bear.*** From 1 January 2005 all parents with infants in Trondheim will receive a teddy bear with the inscription "Hold me". This is to remind parents to keep a constant eye on their child to prevent accidents like falling off the changing table/bathinette.

We are putting more focus on accident prevention in day-care centres and schools. Using internal control, day-care centres and schools will systematize the registration of events and accidents and use data from the injury register to document whether there has been success in preventing accidents.

## **6. Ongoing participation in national and international Safe Community Networks**

The principal theme of the 2004 IFEH World Congress in South Africa was "Our people, our world", and the prevention of accidents was another major the themes in this congress. Trondheim had one participant at the congress.

Trondheim had one presentation, a poster and four participants at the 14th International Conference of Safe Communities in Prague.

The annual conference for the forum for injury prevention in Stavanger, October 2004 had three participants from Trondheim, and one presentation was given.

In 2005 Trondheim will organize The 1st Safe Community Conference on Injury Surveillance ([www.trondheim.com/safecity](http://www.trondheim.com/safecity)).

Indirectly Trondheim has been represented at a number of international and national conferences, as researchers from SINTEF and St. Olavs University Hospital have presented results from studies and projects carried out in Trondheim, in part in cooperation with the Trondheim local authority, and using statistics that have been compiled from Trondheim's population.

*Primary Health Care (PHC) staff twinning between Latvia and Norway.* PHC in Trondheim has been involved in a sub-project of the Task Force on communicable disease control in the Baltic Sea Region running for 3 years, 2002-2004. Experiences and results: The participating General Practitioners (GP) from both countries agreed at an early stage that some of the goals were too general and ambitious, for instance that this project would be unable to "decrease widespread communicable diseases through prevention and better treatment on the PHC level". We agree that General Medicine has a very important task to fulfil in this respect, but a condition is that general medicine and GPs must have developed tools, and have a position in the total health care system that may give GPs the possibility to achieve results. Since Norwegian general medicine has a much stronger position in the health system in general, a realistic outcome of our project could be to strengthen the professional development and awareness of the Latvian GPs engaged in the project through applying some of the methods used for this purpose in Norway. As a consequence, we organized a joint AUDIT in respiratory diseases.

## References

- 1 St.meld. nr. 16 (2002–2003). Resept for et sunnere Norge. Folkehelsepolitikken (Prescription for a healthier Norway. Public health policies). Recommendation from the Ministry of Health dated 10 January 2003, approved by Council of State same day. (Government headed by K. M. Bondevik)
- 2 Store Lille Trondheim - mot nye mål! Kommuneplanens strategidel 2001-2012 (Great little Trondheim – towards new goals! Strategy section of the city plan 2001-2012. City Council 20 February 2003)
- 3 Folkehelsearbeidet i Trondheim - Veien mot en sunn og trygg by (Public health activities in Trondheim – towards a healthy and safe city). Case recommendation to the City Council – file 03/32546.
- 4 Traffic safety plan
- 5 Fjerdingen, L. and Langeland, P.A. (2001). *Eberg trafikkgård. Evaluering av bruk av trafikkgården i trafikkopplæring - hvilke effekter gir den? Statusdel.* (Eberg traffic-model facility. Evaluation and use of the traffic-model facility for traffic-safety training – what effect does it have? Status section) SINTEF report STF22 A01305
- 6 Jenssen, G.D. & Øvstedal, L. (2000). *Eberg trafikkgård: Trafikkopplæring på sykkel for 5. klassetrinn* (Eberg traffic-model facility: Traffic-safety instruction). SINTEF report STF22 A00559. (Not yet published)

- 7 Ulykkesforebyggende arbeid i Trondheim kommune (Accident-prevention activities in the City of Trondheim), TM 93/08, ISBN 82-7727-005-4, the Environmental Department of the City of Trondheim, 1993.
- 8 A Community-based Intervention Programme for the Prevention of Injuries. Bentzen I., Johnsen R., Garåsen H. and Jenssen JA. 14th International Conference on the Safe Community, Prague 2004.
- 9 Sikkerhet for barn, Informasjonsbrosjyre (Safety for Children, Information Brochure), the City of Trondheim, 2000.
- 10 Guidelines for conducting community surveys on injuries and violence. Eds: Sethi D., Habibula S., McGee K., Peden M., Bennet S., Hyder A.A., Klevens J., Odero W, Suriyawongpaisal P. World Health Organization, Geneva, 2004.
- 11 Stene, T. M. & Lervåg, L.-E. (2003). *Tiltak mot sykkelulykker i Trondheim på bakgrunn av registreringer ved St. Olavs University Hospital* (Measures against bicycling accidents in Trondheim based on registrations at St. Olavs University Hospital). SINTEF memo N-10/03
- 12 Øvstedal, L.R., Ryeng, E.O. & Stene, T.M. (2004). *PROMPT New means to Promote Pedestrian Traffic in cities. WP2: Safety and Accessibility - Norway. PROMPT National reports Norway - Part 1*. SINTEF report STF22 04313, SINTEF Technology and Society, Trondheim, Norway. (To be published)
- 13 Ulykkesforebyggende arbeid i Trondheim kommune (Accident-prevention activities in the City of Trondheim) 1995-1996.
- 14 TM 96/02, ISBN 82-7727-042-9, the Environmental Department of the City of Trondheim, 1996.
- 15 Ulykkesforebyggende arbeid i Trondheim kommune (Accident-prevention activities in the City of Trondheim) 1993-1994.
- 16 TM 95/07, ISBN 82-7727-037-2, the Environmental Department of the City of Trondheim, 1995.
- 17 Kartlegging av ulykkesforebyggende arbeid i Saupstad district (Survey of accident-prevention activities in Saupstad district), TM 94/11, ISBN 82-7727-027-5, the Environmental Department of the City of Trondheim, 1994.
- 18 Holdninger til ulykkesforebygging i Saupstad distrikt - Resultater fra spørreundersøkelse blant ansatte, småbarnsforeldre og hjemmeboende eldre, sommeren 1994 (Attitudes related to accident-prevention activities in Saupstad district – Results from a questionnaire study among employees, parents of small children and elderly persons living in their own homes, summer 1994), TM 94/10, ISBN 82-7727-026-7, the Environmental Department of the City of Trondheim, 1994.
- 19 Ulykker i Trondheim 1992 (Accidents in Trondheim – 1992), TM 93/19, ISBN 82-7727-013-5, the Environmental Department of the City of Trondheim, 1993.
- 20 Bedre vintervedlikehold gir færre ulykker - resultater fra prøveprosjekt på Ytre Ringveg, (Better winter maintenance reduces the number of accidents – results from a pilot project on the Outer Ring Road) Trondheim Public Works, the City of Trondheim, 1994

- 21 Trafikksikkerhetsplan for Trondheim 2002-2005 med vedlegg: Skolevegrapport 2001 (Traffic safety plan for Trondheim 2002-2005 with attachments: School roads report – 2001), published by the Planning and Construction Department.
- 22 Stene, T. M. & Lereim, I. (1989). *Anvendelse av sykehusdata til forskning innen trafikksikkerhet* (Using hospital data for research on traffic safety). SINTEF report STF63 A89013
- 23 Stene, T. M. (1996). *Sykehusrapporterte syklist- og fotgjengerulykker* (Accidents involving bicyclists and pedestrians reported to the hospital). SINTEF report STF22 A96608
- 24 Jenssen JA, Bentzen I, Lereim I, Garåsen G, Johnsen R: The use of local registers of injuries to identify intervention measures among the youngest children in Trondheim. 14th International Conference on the Safe Community, Prague 2004.
- 25 Lereim, I. Traffic accidents and their consequences : a study on injured road-users treated at the Regional Hospital of Trondheim. Acta Universitatis Nidrosiensis Facultatis Medicinae. Series A, Dissertations ; 15; 1984; ISBN 82-519-0616-4.
- 26 Sahlin, Y. Injury registration : a tool for accident preventive work. Acta universitatis nidrosiensis facultatis medicinae. Series A, Dissertations ; 61; 1990. ISBN: 82-519-1049-8.
- 27 Berg, B. SINTEF. En stein i elva, evaluering av et kvalifiseringsprosjekt for ungdom med minoritetsbakgrunn. ISBN 82-14-03025-0